

Taking Weatherization to New Heights in Colorado

Colorado's spectacular mountain vistas draw visitors from around the world. Navigating the rugged terrain can pose a serious challenge, particularly in the winter when snow fills mountain passes. To overcome these obstacles, Colorado employs innovative solutions, such as building the world's highest suspension bridge and the world's highest auto tunnel. Colorado also applies this innovative approach when developing energy efficiency solutions. A prime example is Colorado's partnership with the U.S. Department of Energy (DOE) to deliver the Weatherization Assistance Program (Weatherization). Weatherization reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring their health and safety.

EASING THE PEAKS AND VALLEYS

Low-income households typically spend 14% of their total annual income on energy, compared with 3.5% for other households. This burden becomes even more unmanageable when energy prices soar or temperatures plunge. Low-income families often have to cut back on other necessities to pay their energy bills.

Weatherization measures reduce energy costs and alleviate the high energy burden for low-income families. The energy efficiency measures installed provide a permanent boost to the household's budget. A recent survey in Colorado revealed that one out of four weatherization recipients experienced a 37% reduction in their heating bills. Nationally, the average household saves \$300 per year on energy costs after weatherization.

The Governor's Office of Energy Management and Conservation administers the Weatherization Program and a network of eight local agencies delivers energy efficiency services to every county in the state. Professionally trained crews use computerized energy audits and advanced diagnostic equipment, such as the blower door and digital manometer, to determine the most cost-effective measures for each home.

NATIONAL WEATHERIZATION PROGRAM

Homes weatherized in 1999	68,000
DOE allocations in 1999	\$135 million
Average annual energy cost savings per household	\$300
Average space heating savings	25-30%
Energy benefits returned for every \$1 invested	\$2.10
Jobs supported	7,000

COLORADO

Homes weatherized in 1999 (with DOE \$)	1,222
DOE funding in 1999	\$3.2 million
Clients served in 1999	8,514
Elderly	13%
People with disabilities	14%
Families with children	24%

Weatherization crews also test heating units and appliances for carbon monoxide and gas leaks. Typical weatherization services for single-family and mobile homes include installing insulation; sealing ducts; tuning and repairing furnaces and water heaters; and mitigating heat loss through windows, doors, and other infiltration points. Since the program's inception in 1976, more than 60,000 Colorado homes have been weatherized.

Pinnacle of Efficiency

Home to 58 mountains that soar over 14,000 feet, it may be the impressive peaks that inspire Coloradans to seek higher levels of efficiency. The state developed a comprehensive approach to improving program efficiency that encompasses administrative, technical, and financial issues.

To improve administrative efficiency, the program restructured its delivery network and established closer ties with the Public Service Company of Colorado and the U.S.

Department of Health and Human Services' Low-Income Home Energy Assistance Program (LIHEAP). The streamlined program, now called Energy Saving Partners, reduces administrative costs by 32%, or \$639,000 per year.

Colorado has increased technical efficiency by integrating advanced diagnostics, expanding training activities, and tracking weatherization measures installed. Tracking results is particularly important because a portion of the program's utility funding is linked to demonstrated energy savings. This system helps agencies focus on the most cost-effective measures for different housing stock. By fine-tuning their approach, one agency in the western slope area has demonstrated 30% average energy savings.

To boost financial resources, Colorado lawmakers are exploring ways to increase the amount of funding allocated to Energy Saving Partners. This increase will allow agencies to weatherize more low-income homes.

Striving for the Top

Delivering top-quality weatherization services is the driving force behind Colorado's program. This goal is reflected in the actions of weatherization technicians and program staff every day. Weatherization crews often find themselves pitching in more than the energy efficiency measures required. Samantha Pederson,* a weatherization recipient in Loveland, thanked the crew for cleaning her yard and helping to vacuum after their day's work was complete. She was

also surprised when the crew noticed one more "spot" that needed attention as they were leaving. Samantha said, "they just smiled and pulled the equipment back out to finish the job 100%."

To celebrate Colorado Cares Day, staff from the Governor's Office of Energy Management and Conservation traded their suits and computers for safety goggles

and insulation materials. The program staff worked with weatherization technicians to install basic energy efficiency measures. It was quite a switch from the usual day at the office, but all who participated felt they made a valuable contribution.

A Mountain of Benefits

Weatherization produces an impressive range of benefits for low-income households and communities. Nationally, for every \$1 invested in the program, Weatherization returns \$2.10 in energy-related benefits. Weatherization measures reduce national energy consumption and curb demand for imported oil. Weatherization works for Colorado and America!

**Names have been changed to protect the privacy of the subjects.*



Weatherization crew blows insulation into the roof of a mobile home through a tube.



TO LEARN MORE ABOUT THE WEATHERIZATION ASSISTANCE PROGRAM, CONTACT:

Weatherization Assistance Program • U.S. Department of Energy, EE-42
1000 Independence Avenue, SW • Washington, DC 20585-0121 • (202) 586-4074

Visit the Weatherization Web site at: www.eren.doe.gov/buildings/weatherization_assistance
or call the Energy Efficiency and Renewable Energy Clearinghouse at: 1-800-DOE-3732



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